

	A	B	C	D	E	F	G	H	I	J	K	L
1	General UCL Statistics for Data Sets with Non-Detects											
2	User Selected Options											
3	From File		Sheet1_a.wst									
4	Full Precision		OFF									
5	Confidence Coefficient		95%									
6	Number of Bootstrap Operations		2000									
7												
8												
9	Result_Value (1,3-dichlorobenzene_ug/kg)											
10												
11	General Statistics											
12	Number of Valid Data				33				Number of Detected Data			
13	Number of Distinct Detected Data				0				Number of Non-Detect Data			
14									Percent Non-Detects			
15												
16	Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!											
17	Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!											
18	The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).											
19												
20	The data set for variable Result_Value (1,3-dichlorobenzene_ug/kg) was not processed!											
21												
22												
23												
24	Result_Value (1,4-dichlorobenzene_ug/kg)											
25												
26	General Statistics											
27	Number of Valid Data				20				Number of Detected Data			
28	Number of Distinct Detected Data				0				Number of Non-Detect Data			
29									Percent Non-Detects			
30												
31	Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!											
32	Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!											
33	The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).											
34												
35	The data set for variable Result_Value (1,4-dichlorobenzene_ug/kg) was not processed!											
36												
37												
38												
39	Result_Value (hexachlorobenzene_ug/kg)											
40												
41	General Statistics											
42	Number of Valid Data				33				Number of Detected Data			
43	Number of Distinct Detected Data				20				Number of Non-Detect Data			
44									Percent Non-Detects			
45												
46	Raw Statistics						Log-transformed Statistics					
47	Minimum Detected			191			Minimum Detected			5.252		
48	Maximum Detected			5430			Maximum Detected			8.6		
49	Mean of Detected			821			Mean of Detected			6.401		
50	SD of Detected			1104			SD of Detected			0.66		
51	Minimum Non-Detect			347			Minimum Non-Detect			5.849		
52	Maximum Non-Detect			748			Maximum Non-Detect			6.617		
53												
54	Note: Data have multiple DLs - Use of KM Method is recommended						Number treated as Non-Detect			28		
55	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected			5		
56	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage			84.85%		
57												
58	UCL Statistics											
59	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only					
60	Shapiro Wilk Test Statistic			0.407			Shapiro Wilk Test Statistic			0.839		
61	5% Shapiro Wilk Critical Value			0.905			5% Shapiro Wilk Critical Value			0.905		
62	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level					
63												
64	Assuming Normal Distribution						Assuming Lognormal Distribution					
65	DL/2 Substitution Method						DL/2 Substitution Method					
66	Mean			591.1			Mean			6.013		
67	SD			900.2			SD			0.734		
68	95% DL/2 (t) UCL			856.5			95% H-Stat (DL/2) UCL			707.1		
69												
70	Maximum Likelihood Estimate(MLE) Method						N/A			Log ROS Method		
71	MLE yields a negative mean									Mean in Log Scale		
72										SD in Log Scale		
73										Mean in Original Scale		

	A	B	C	D	E	F	G	H	I	J	K	L		
74											SD in Original Scale	892.5		
75											95% t UCL	871.8		
76											95% Percentile Bootstrap UCL	910.7		
77											95% BCA Bootstrap UCL	1105		
78											95% H-UCL	695.2		
79														
80	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only							
81	k star (bias corrected)						1.533	Data do not follow a Discernable Distribution (0.05)						
82	Theta Star						535.4							
83	nu star						61.33							
84														
85	A-D Test Statistic						2.019	Nonparametric Statistics						
86	5% A-D Critical Value						0.755	Kaplan-Meier (KM) Method						
87	K-S Test Statistic						0.755	Mean						621
88	5% K-S Critical Value						0.197	SD						877.2
89	Data not Gamma Distributed at 5% Significance Level							SE of Mean						157.7
90								95% KM (t) UCL						888
91	Assuming Gamma Distribution							95% KM (z) UCL						880.3
92	Gamma ROS Statistics using Extrapolated Data							95% KM (jackknife) UCL						886.5
93	Minimum						1E-06	95% KM (bootstrap t) UCL						1413
94	Maximum						5430	95% KM (BCA) UCL						949.8
95	Mean						546.8	95% KM (Percentile Bootstrap) UCL						920.5
96	Median						413.5	95% KM (Chebyshev) UCL						1308
97	SD						925.8	97.5% KM (Chebyshev) UCL						1606
98	k star						0.16	99% KM (Chebyshev) UCL						2190
99	Theta star						3422							
100	Nu star						10.55	Potential UCLs to Use						
101	AppChi2						4.285	95% KM (BCA) UCL						949.8
102	95% Gamma Approximate UCL (Use when n >= 40)						1346							
103	95% Adjusted Gamma UCL (Use when n < 40)						1413							
104	Note: DL/2 is not a recommended method.													
105														
106	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UC													
107	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006)													
108	For additional insight, the user may want to consult a statistician.													
109														
110														
111	Result_Value (hexachlorobutadiene_ug/kg)													
112														
113	General Statistics													
114	Number of Valid Data						20	Number of Detected Data						0
115	Number of Distinct Detected Data						0	Number of Non-Detect Data						20
116								Percent Non-Detects						100.00%
117														
118	Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!													
119	Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!													
120	The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).													
121														
122	The data set for variable Result_Value (hexachlorobutadiene_ug/kg) was not processed!													
123														
124														
125														
126	Result_Value (lead_mg/kg)													
127														
128	General Statistics													
129	Number of Valid Observations						20	Number of Distinct Observations						20
130														
131	Raw Statistics						Log-transformed Statistics							
132	Minimum						0.092	Minimum of Log Data						-2.386
133	Maximum						0.518	Maximum of Log Data						-0.658
134	Mean						0.183	Mean of log Data						-1.837
135	Geometric Mean						0.159	SD of log Data						0.503
136	Median						0.126							
137	SD						0.112							
138	Std. Error of Mean						0.0251							
139	Coefficient of Variation						0.616							
140	Skewness						1.761							
141														
142	Relevant UCL Statistics													
143	Normal Distribution Test						Lognormal Distribution Test							
144	Shapiro Wilk Test Statistic						0.757	Shapiro Wilk Test Statistic						0.858
145	Shapiro Wilk Critical Value						0.905	Shapiro Wilk Critical Value						0.905
146	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level							

	A	B	C	D	E	F	G	H	I	J	K	L	
147													
148	Assuming Normal Distribution						Assuming Lognormal Distribution						
149	95% Student's-t UCL					0.226	95% H-UCL					0.228	
150	95% UCLs (Adjusted for Skewness)						95% Chebyshev (MVUE) UCL						0.271
151	95% Adjusted-CLT UCL (Chen-1995)					0.235	97.5% Chebyshev (MVUE) UCL					0.31	
152	95% Modified-t UCL (Johnson-1978)					0.228	99% Chebyshev (MVUE) UCL					0.388	
153													
154	Gamma Distribution Test						Data Distribution						
155	k star (bias corrected)					3.28	Data do not follow a Discernable Distribution (0.05)						
156	Theta Star					0.0557							
157	MLE of Mean					0.183							
158	MLE of Standard Deviation					0.101							
159	nu star					131.2							
160	Approximate Chi Square Value (.05)					105.7	Nonparametric Statistics						
161	Adjusted Level of Significance					0.038	95% CLT UCL					0.224	
162	Adjusted Chi Square Value					103.9	95% Jackknife UCL					0.226	
163							95% Standard Bootstrap UCL					0.222	
164	Anderson-Darling Test Statistic					1.449	95% Bootstrap-t UCL					0.248	
165	Anderson-Darling 5% Critical Value					0.746	95% Hall's Bootstrap UCL					0.24	
166	Kolmogorov-Smirnov Test Statistic					0.236	95% Percentile Bootstrap UCL					0.225	
167	Kolmogorov-Smirnov 5% Critical Value					0.195	95% BCA Bootstrap UCL					0.233	
168	Data not Gamma Distributed at 5% Significance Level						95% Chebyshev(Mean, Sd) UCL					0.292	
169							97.5% Chebyshev(Mean, Sd) UCL					0.34	
170	Assuming Gamma Distribution						99% Chebyshev(Mean, Sd) UCL					0.433	
171	95% Approximate Gamma UCL (Use when n >= 40)					0.227							
172	95% Adjusted Gamma UCL (Use when n < 40)					0.23							
173													
174	Potential UCL to Use						Use 95% Chebyshev (Mean, Sd) UCL					0.292	
175													
176	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UC												
177	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)												
178	and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.												
179													
180													
181	Result_Value (mercury_mg/kg)												
182													
183	General Statistics												
184	Number of Valid Observations					33	Number of Distinct Observations					24	
185													
186	Raw Statistics						Log-transformed Statistics						
187	Minimum					0.009	Minimum of Log Data					-4.711	
188	Maximum					0.083	Maximum of Log Data					-2.489	
189	Mean					0.0468	Mean of log Data					-3.132	
190	Geometric Mean					0.0436	SD of log Data					0.42	
191	Median					0.046							
192	SD					0.0158							
193	Std. Error of Mean					0.00275							
194	Coefficient of Variation					0.338							
195	Skewness					-0.0016							
196													
197	Relevant UCL Statistics												
198	Normal Distribution Test						Lognormal Distribution Test						
199	Shapiro Wilk Test Statistic					0.989	Shapiro Wilk Test Statistic					0.884	
200	Shapiro Wilk Critical Value					0.931	Shapiro Wilk Critical Value					0.931	
201	Data appear Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level						
202													
203	Assuming Normal Distribution						Assuming Lognormal Distribution						
204	95% Student's-t UCL					0.0515	95% H-UCL					0.0548	
205	95% UCLs (Adjusted for Skewness)						95% Chebyshev (MVUE) UCL						0.0632
206	95% Adjusted-CLT UCL (Chen-1995)					0.0514	97.5% Chebyshev (MVUE) UCL					0.07	
207	95% Modified-t UCL (Johnson-1978)					0.0515	99% Chebyshev (MVUE) UCL					0.0833	
208													
209	Gamma Distribution Test						Data Distribution						
210	k star (bias corrected)					6.595	Data appear Normal at 5% Significance Level						
211	Theta Star					0.0071							
212	MLE of Mean					0.0468							
213	MLE of Standard Deviation					0.0182							
214	nu star					435.3							
215	Approximate Chi Square Value (.05)					387.9	Nonparametric Statistics						
216	Adjusted Level of Significance					0.0419	95% CLT UCL					0.0514	
217	Adjusted Chi Square Value					385.6	95% Jackknife UCL					0.0515	
218							95% Standard Bootstrap UCL					0.0514	
219	Anderson-Darling Test Statistic					0.478	95% Bootstrap-t UCL					0.0517	

	A	B	C	D	E	F	G	H	I	J	K	L	
220	Anderson-Darling 5% Critical Value					0.748	95% Hall's Bootstrap UCL					0.0516	
221	Kolmogorov-Smirnov Test Statistic					0.143	95% Percentile Bootstrap UCL					0.0512	
222	Kolmogorov-Smirnov 5% Critical Value					0.153	95% BCA Bootstrap UCL					0.0512	
223	Data appear Gamma Distributed at 5% Significance Level						95% Chebyshev(Mean, Sd) UCL					0.0589	
224							97.5% Chebyshev(Mean, Sd) UCL					0.0641	
225	Assuming Gamma Distribution						99% Chebyshev(Mean, Sd) UCL					0.0743	
226	95% Approximate Gamma UCL (Use when n >= 40)					0.0526							
227	95% Adjusted Gamma UCL (Use when n < 40)					0.0529							
228													
229	Potential UCL to Use						Use 95% Student's-t UCL					0.0515	
230													
231	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UC												
232	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)												
233	and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.												
234													
235	Note: For highly negative-skewed data, confidence limits												
236	(e.g., Chen, Johnson, Lognormal, and Gamma) may not be												
237	reliable. Chen's and Johnson's methods provide												
238	adjustments for positively skewed data sets.												
239													
240													
241	Result_Value (total dioxin/furan teq 1998 (avian) (u = 1/2)_ng/kg)												
242													
243	General Statistics												
244	Number of Valid Observations					25	Number of Distinct Observations					25	
245													
246	Raw Statistics						Log-transformed Statistics						
247	Minimum					2.513	Minimum of Log Data					0.921	
248	Maximum					44.76	Maximum of Log Data					3.801	
249	Mean					20.03	Mean of log Data					2.877	
250	Geometric Mean					17.77	SD of log Data					0.565	
251	Median					19.3							
252	SD					8.844							
253	Std. Error of Mean					1.769							
254	Coefficient of Variation					0.442							
255	Skewness					0.682							
256													
257	Relevant UCL Statistics												
258	Normal Distribution Test						Lognormal Distribution Test						
259	Shapiro Wilk Test Statistic					0.968	Shapiro Wilk Test Statistic					0.87	
260	Shapiro Wilk Critical Value					0.918	Shapiro Wilk Critical Value					0.918	
261	Data appear Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level						
262													
263	Assuming Normal Distribution						Assuming Lognormal Distribution						
264	95% Student's-t UCL					23.05	95% H-UCL					26.28	
265	95% UCLs (Adjusted for Skewness)						95% Chebyshev (MVUE) UCL						31.39
266	95% Adjusted-CLT UCL (Chen-1995)					23.19	97.5% Chebyshev (MVUE) UCL					36.02	
267	95% Modified-t UCL (Johnson-1978)					23.09	99% Chebyshev (MVUE) UCL					45.12	
268													
269	Gamma Distribution Test						Data Distribution						
270	k star (bias corrected)					3.845	Data appear Normal at 5% Significance Level						
271	Theta Star					5.209							
272	MLE of Mean					20.03							
273	MLE of Standard Deviation					10.21							
274	nu star					192.2							
275	Approximate Chi Square Value (.05)					161.2	Nonparametric Statistics						
276	Adjusted Level of Significance					0.0395	95% CLT UCL					22.94	
277	Adjusted Chi Square Value					159.2	95% Jackknife UCL					23.05	
278							95% Standard Bootstrap UCL					22.88	
279	Anderson-Darling Test Statistic					0.438	95% Bootstrap-t UCL					23.32	
280	Anderson-Darling 5% Critical Value					0.748	95% Hall's Bootstrap UCL					23.58	
281	Kolmogorov-Smirnov Test Statistic					0.136	95% Percentile Bootstrap UCL					22.97	
282	Kolmogorov-Smirnov 5% Critical Value					0.175	95% BCA Bootstrap UCL					23.2	
283	Data appear Gamma Distributed at 5% Significance Level						95% Chebyshev(Mean, Sd) UCL					27.74	
284							97.5% Chebyshev(Mean, Sd) UCL					31.07	
285	Assuming Gamma Distribution						99% Chebyshev(Mean, Sd) UCL					37.63	
286	95% Approximate Gamma UCL (Use when n >= 40)					23.89							
287	95% Adjusted Gamma UCL (Use when n < 40)					24.18							
288													
289	Potential UCL to Use						Use 95% Student's-t UCL					23.05	
290													
291	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UC												
292	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)												

	A	B	C	D	E	F	G	H	I	J	K	L						
293	and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.																	
294																		
295																		
296	Result_Value (total pah (16) (u = 1/2)_ug/kg)																	
297																		
298	General Statistics																	
299	Number of Valid Data				20				Number of Detected Data				7					
300	Number of Distinct Detected Data				7				Number of Non-Detect Data				13					
301									Percent Non-Detects				65.00%					
302																		
303	Raw Statistics						Log-transformed Statistics											
304	Minimum Detected				60.91				Minimum Detected				4.109					
305	Maximum Detected				552.1				Maximum Detected				6.314					
306	Mean of Detected				157.2				Mean of Detected				4.706					
307	SD of Detected				178.3				SD of Detected				0.803					
308	Minimum Non-Detect				6.93				Minimum Non-Detect				1.936					
309	Maximum Non-Detect				14.8				Maximum Non-Detect				2.695					
310																		
311	Note: Data have multiple DLs - Use of KM Method is recommen						Number treated as Non-Detect						13					
312	For all methods (except KM, DL/2, and ROS Methods),						Number treated as Detected						7					
313	Observations < Largest ND are treated as NDs						Single DL Non-Detect Percentage						65.00%					
314																		
315	Warning: There are only 7 Detected Values in this data																	
316	Note: It should be noted that even though bootstrap may be performed on this data set																	
317	the resulting calculations may not be reliable enough to draw conclusions																	
318																		
319	It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.																	
320																		
321																		
322	UCL Statistics																	
323	Normal Distribution Test with Detected Values Only						Lognormal Distribution Test with Detected Values Only											
324	Shapiro Wilk Test Statistic				0.622				Shapiro Wilk Test Statistic				0.792					
325	5% Shapiro Wilk Critical Value				0.803				5% Shapiro Wilk Critical Value				0.803					
326	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level											
327																		
328	Assuming Normal Distribution						Assuming Lognormal Distribution											
329	DL/2 Substitution Method								DL/2 Substitution Method									
330	Mean				59.01				Mean				2.796					
331	SD				124.5				SD				1.531					
332	95% DL/2 (t) UCL				107.2				95% H-Stat (DL/2) UCL				179.2					
333																		
334	Maximum Likelihood Estimate(MLE) Method				N/A				Log ROS Method									
335	MLE yields a negative mean						Mean in Log Scale						2.988					
336							SD in Log Scale						1.405					
337							Mean in Original Scale						60.5					
338							SD in Original Scale						123.9					
339							95% t UCL						108.4					
340							95% Percentile Bootstrap UCL						107.9					
341							95% BCA Bootstrap UCL						140					
342							95% H-UCL						152.7					
343																		
344	Gamma Distribution Test with Detected Values Only						Data Distribution Test with Detected Values Only											
345	k star (bias corrected)				0.992				Data Follow Appr. Gamma Distribution at 5% Significance Leve									
346	Theta Star				158.5													
347	nu star				13.89													
348																		
349	A-D Test Statistic				0.892				Nonparametric Statistics									
350	5% A-D Critical Value				0.72				Kaplan-Meier (KM) Method									
351	K-S Test Statistic				0.72				Mean				94.62					
352	5% K-S Critical Value				0.317				SD				107.9					
353	Data follow Appr. Gamma Distribution at 5% Significance Leve						SE of Mean						26.07					
354							95% KM (t) UCL						139.7					
355	Assuming Gamma Distribution						95% KM (z) UCL						137.5					
356	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL						137.4					
357	Minimum				1E-06				95% KM (bootstrap t) UCL				319					
358	Maximum				552.1				95% KM (BCA) UCL				148.3					
359	Mean				55.03				95% KM (Percentile Bootstrap) UCL				145					
360	Median				1E-06				95% KM (Chebyshev) UCL				208.2					
361	SD				126.3				97.5% KM (Chebyshev) UCL				257.4					
362	k star				0.0964				99% KM (Chebyshev) UCL				354					
363	Theta star				570.9													
364	Nu star				3.855				Potential UCLs to Use									
365	AppChi2				0.665				95% KM (t) UCL				139.7					

	A	B	C	D	E	F	G	H	I	J	K	L		
366	95% Gamma Approximate UCL (Use when n >= 40)					318.8								
367	95% Adjusted Gamma UCL (Use when n < 40)					370.6								
368	Note: DL/2 is not a recommended method.													
369														
370	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UC													
371	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006)													
372	For additional insight, the user may want to consult a statistician.													
373														
374														
375	Result_Value (total pcb congener (u = 1/2)_ng/kg)													
376														
377	General Statistics													
378	Number of Valid Observations					33	Number of Distinct Observations					33		
379														
380	Raw Statistics						Log-transformed Statistics							
381	Minimum					228677	Minimum of Log Data					12.34		
382	Maximum					2192372	Maximum of Log Data					14.6		
383	Mean					959737	Mean of log Data					13.63		
384	Geometric Mean					829509	SD of log Data					0.553		
385	Median					763874								
386	SD					538979								
387	Std. Error of Mean					93824								
388	Coefficient of Variation					0.562								
389	Skewness					1.038								
390														
391	Relevant UCL Statistics													
392	Normal Distribution Test						Lognormal Distribution Test							
393	Shapiro Wilk Test Statistic					0.878	Shapiro Wilk Test Statistic					0.972		
394	Shapiro Wilk Critical Value					0.931	Shapiro Wilk Critical Value					0.931		
395	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level							
396														
397	Assuming Normal Distribution						Assuming Lognormal Distribution							
398	95% Student's-t UCL					1118664	95% H-UCL					1172749		
399	95% UCLs (Adjusted for Skewness)						95% Chebyshev (MVUE) UCL						1387012	
400	95% Adjusted-CLT UCL (Chen-1995)						1132170	97.5% Chebyshev (MVUE) UCL						1571147
401	95% Modified-t UCL (Johnson-1978)						1121489	99% Chebyshev (MVUE) UCL						1932846
402														
403	Gamma Distribution Test						Data Distribution							
404	k star (bias corrected)					3.281	Data appear Gamma Distributed at 5% Significance Level							
405	Theta Star					292511								
406	MLE of Mean					959737								
407	MLE of Standard Deviation					529843								
408	nu star					216.5								
409	Approximate Chi Square Value (.05)					183.5	Nonparametric Statistics							
410	Adjusted Level of Significance					0.0419	95% CLT UCL					1114064		
411	Adjusted Chi Square Value					181.9	95% Jackknife UCL					1118664		
412							95% Standard Bootstrap UCL					1106981		
413	Anderson-Darling Test Statistic					0.532	95% Bootstrap-t UCL					1149439		
414	Anderson-Darling 5% Critical Value					0.752	95% Hall's Bootstrap UCL					1128167		
415	Kolmogorov-Smirnov Test Statistic					0.115	95% Percentile Bootstrap UCL					1111278		
416	Kolmogorov-Smirnov 5% Critical Value					0.154	95% BCA Bootstrap UCL					1123508		
417	Data appear Gamma Distributed at 5% Significance Level						95% Chebyshev(Mean, Sd) UCL						1368707	
418							97.5% Chebyshev(Mean, Sd) UCL						1545669	
419	Assuming Gamma Distribution						99% Chebyshev(Mean, Sd) UCL						1893276	
420	95% Approximate Gamma UCL (Use when n >= 40)					1132638								
421	95% Adjusted Gamma UCL (Use when n < 40)					1142373								
422														
423	Potential UCL to Use						Use 95% Approximate Gamma UCL						1132638	
424														
425	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UC													
426	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)													
427	and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.													
428														
429														
430	Result_Value (total pcb congener teq 1998 (avian) (u = 1/2)_ng/kg)													
431														
432	General Statistics													
433	Number of Valid Observations					33	Number of Distinct Observations					33		
434														
435	Raw Statistics						Log-transformed Statistics							
436	Minimum					97.57	Minimum of Log Data					4.581		
437	Maximum					782.9	Maximum of Log Data					6.663		
438	Mean					404.3	Mean of log Data					5.914		

	A	B	C	D	E	F	G	H	I	J	K	L	
439	Geometric Mean					370.4	SD of log Data					0.451	
440	Median					369.9							
441	SD					160.9							
442	Std. Error of Mean					28							
443	Coefficient of Variation					0.398							
444	Skewness					0.406							
445													
446	Relevant UCL Statistics												
447	Normal Distribution Test						Lognormal Distribution Test						
448	Shapiro Wilk Test Statistic					0.974	Shapiro Wilk Test Statistic					0.95	
449	Shapiro Wilk Critical Value					0.931	Shapiro Wilk Critical Value					0.931	
450	Data appear Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level						
451													
452	Assuming Normal Distribution						Assuming Lognormal Distribution						
453	95% Student's-t UCL					451.7	95% H-UCL					476.8	
454	95% UCLs (Adjusted for Skewness)						95% Chebyshev (MVUE) UCL						553.4
455	95% Adjusted-CLT UCL (Chen-1995)					452.5	97.5% Chebyshev (MVUE) UCL					616.1	
456	95% Modified-t UCL (Johnson-1978)					452.1	99% Chebyshev (MVUE) UCL					739.2	
457													
458	Gamma Distribution Test						Data Distribution						
459	k star (bias corrected)					5.35	Data appear Normal at 5% Significance Level						
460	Theta Star					75.57							
461	MLE of Mean					404.3							
462	MLE of Standard Deviation					174.8							
463	nu star					353.1							
464	Approximate Chi Square Value (.05)					310.5	Nonparametric Statistics						
465	Adjusted Level of Significance					0.0419	95% CLT UCL					450.4	
466	Adjusted Chi Square Value					308.5	95% Jackknife UCL					451.7	
467							95% Standard Bootstrap UCL					449.5	
468	Anderson-Darling Test Statistic					0.251	95% Bootstrap-t UCL					454.4	
469	Anderson-Darling 5% Critical Value					0.748	95% Hall's Bootstrap UCL					453.1	
470	Kolmogorov-Smirnov Test Statistic					0.0852	95% Percentile Bootstrap UCL					450.6	
471	Kolmogorov-Smirnov 5% Critical Value					0.153	95% BCA Bootstrap UCL					450.1	
472	Data appear Gamma Distributed at 5% Significance Level						95% Chebyshev(Mean, Sd) UCL						526.4
473							97.5% Chebyshev(Mean, Sd) UCL					579.2	
474	Assuming Gamma Distribution						99% Chebyshev(Mean, Sd) UCL						682.9
475	95% Approximate Gamma UCL (Use when n >= 40)					459.7							
476	95% Adjusted Gamma UCL (Use when n < 40)					462.7							
477													
478	Potential UCL to Use						Use 95% Student's-t UCL						451.7
479													
480	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UC												
481	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)												
482	and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.												
483													
484													
485	Result_Value (total pcb congener teq 2005 (mammal) (u = 1/2)_ng/kg)												
486													
487	General Statistics												
488	Number of Valid Observations					33	Number of Distinct Observations					33	
489													
490	Raw Statistics						Log-transformed Statistics						
491	Minimum					8.2	Minimum of Log Data					2.104	
492	Maximum					49.2	Maximum of Log Data					3.896	
493	Mean					24.77	Mean of log Data					3.114	
494	Geometric Mean					22.51	SD of log Data					0.462	
495	Median					23.2							
496	SD					10.51							
497	Std. Error of Mean					1.83							
498	Coefficient of Variation					0.424							
499	Skewness					0.508							
500													
501	Relevant UCL Statistics												
502	Normal Distribution Test						Lognormal Distribution Test						
503	Shapiro Wilk Test Statistic					0.959	Shapiro Wilk Test Statistic					0.955	
504	Shapiro Wilk Critical Value					0.931	Shapiro Wilk Critical Value					0.931	
505	Data appear Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level						
506													
507	Assuming Normal Distribution						Assuming Lognormal Distribution						
508	95% Student's-t UCL					27.87	95% H-UCL					29.28	
509	95% UCLs (Adjusted for Skewness)						95% Chebyshev (MVUE) UCL						34.06
510	95% Adjusted-CLT UCL (Chen-1995)					27.95	97.5% Chebyshev (MVUE) UCL					38	
511	95% Modified-t UCL (Johnson-1978)					27.9	99% Chebyshev (MVUE) UCL					45.74	

